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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/054,498	01/22/2002	John Barnard Welsh	P0026US20	4754

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CORPORATE INTELLECTUAL PROPERTY
ONE HEALTH PLAZA 104/3
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EXAMINER	
UNGAR, SUSAN NMN	

ART UNIT	PAPER NUMBER
1642	

DATE MAILED: 02/24/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/054,498	WELSH ET AL.	
	Examiner	Art Unit	
	Susan Ungar	1642	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on *08 December 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☐ Claim(s) *1-62* is/are pending in the application.

4a) Of the above claim(s) *2 and 7-62* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☐ Claim(s) *1 and 3-6* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *11/15/02, 4/15/03*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☑ Other: Notice to comply

1. The Election filed December 8, 2004 in response to the Office Action of October 5, 2004 is acknowledged and has been entered. Claims 1-62 are pending in the application and Claims 2, 7-62 have been withdrawn from further consideration by the examiner under 37 CFR 1.142(b) as being drawn to non-elected inventions. It is noted that because Applicant elected only the single gene, hepsin X07732, claim 2 has been properly withdrawn from consideration. Claims 1, 3-6 drawn to a method for screening a subject for prostate cancer comprising assaying for overexpression of hepsin mRNA are currently under prosecution.

2. Applicant's election with traverse of Group 1, claims 1-6 drawn to screening for prostate cancer by assaying for expression of the hepsin gene identified in Tables 2 and 4, Hepsin X07732 is acknowledged. The traversal is on the ground(s) that the inventions of Groups 1 and 2 are not independent or distinct because the claims recite essentially the same steps, thus they are unlikely to be patentable over each other and patentability of one group would necessarily indicate the patentability of the other. The argument has been considered but has not been found persuasive because the methods are drawn to different response variables and have different criteria for success. Contrary to Applicant's arguments, the patentability of one does not necessarily indicate the patentability of the other because different searches and issues are involved in the examination of each group. Applicant further argues that, as to the burden of search, the subject matter encompassed by Groups 1 and 2 are not different art classes or subclasses from that encompassed by Groups 3 and 4. Thus, all prior art relevant to Groups 3 and 4 should reasonably have been encompassed by the search already performed with respect to Groups 1 and 2. The argument has

been considered but has not been found persuasive because , classification of subject matter is merely one indication of the burdensome nature of the search involved. The literature search, particularly relevant in this art, is not coextensive and different searches and issues are involved in the examination of each group. Applicant further argues that groups 5-10 recite similar claim elements on which patentability of the claims reside and the claims are not so independent or distinct as to warrant restriction among themselves or between each of these groups and one of Groups 1-4. The argument has been considered but has not been found persuasive for the reasons set forth above and previously.

Applicant further argues that the restriction requirement drawn to the prostate cancer markers is more properly a requirement of an election of species because claim 1 is a genus claim and thus if the genus claim is found allowable, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim. The argument has been considered and has been found persuasive, thus the restriction of Groups 1-10 is revised as follows:

Each of Groups 1-10 are drawn to methods for involving 3.01×10^{105} species of markers. (It is noted herein that Table 4 consists of 50 markers and encompasses all of the markers in Tables 2 and 3 and therefore the number of species has been revised to reflect this number, that is $50! = 3.01 \times 10^{105}$. Each species comprising one or more prostate cancer markers is distinct from the others because each individual marker is a distinct marker having a nucleotide sequence that differs from the others. Accordingly, the examination of each species comprising one or more prostate cancer markers would require a unique search that is different from that of other species because the search of any one

marker will not provide adequate information regarding any other, and therefore the search of any one combination of markers will not provide adequate information regarding a different combination. See MPEP § 809.

The Examiner notes that the presence of one novel and nonobvious prostate cancer marker within a specifically claimed species of composition would render that species of markers allowable over the prior art (but not necessarily over 35 U.S.C. 101 and 112).

Upon the allowance of a generic claim, Applicant will be entitled to consideration of claims to additional species, which are written in dependent form, or otherwise, include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

Applicant further argues that it is improper to split a single claim into multiple inventions and that if the restriction is allowed to stand, Applicants will never be accorded the basic right to claim his invention a he chooses and that as a general proposition, an applicant has a right to have each claim examined on the merits and cites *In re Weber*. As such the restriction requirement is improper as a matter of law. The argument has been considered but has not been found persuasive because Applicant's interpretation of the claims and the restriction set forth above is unwarranted since the components to which the claims are directed are 50 structurally and functionally unrelated molecules. MPEP § 803.02 states:

[I]t is improper for the Office to refuse to examine that which applicants regard as their invention, unless the subject matter in a claim lacks unity of invention. In re Harnish, 631 F.2d 716, 206 USPQ 300 (CCPA 1980); and Ex parte Hozumi, 3 USPQ2d 1059 (Bd. Pat. App. & Int. 1984). Broadly, unity of invention exists where prostate markers included within

the claim group (1) share a common utility, and (2) share a substantial structural feature disclosed as being essential to that utility.

In this instance, therefore, although the markers of the claim group share a common *prima facie* utility, the compounds do not share a substantial structural feature disclosed as being essential to that utility. Accordingly, it is not improper to restrict the subject matter encompassed by the pending claims into different species of inventions, where the search required to examine more than one of the different species of inventions would constitute a serious burden. See MPEP § 803. In addition the argument has been considered but appears to be moot given Examiner's revision of the restriction requirement. As Applicant has so aptly argued, Examiner may require the election of a species of the invention to which the claims will be restricted if the generic claim is not found to be allowable.

It is noted that, other than the revision of the restriction requirement of the combinations of markers to be assayed from groups to species, no other aspect of the restriction requirement has been altered, thus claim 1 still links inventions (A-B)(i-v). Because applicant did not distinctly and specifically point out the supposed errors in the restriction of linked groups (A-B)(i-v), the election of "RNA" and "localized cancer" has been treated as an election without traverse.

Although the species requirement has been revised, since Applicant has elected Group 1, the species of hepsin alone identified in Tables 2 and 4 as hepsin XO7732, the species of hepsin XO7732 alone will be examined and the issues drawn to the previous restriction requirement remain the same. Thus, for the reasons set forth previously and above, the restriction requirement is deemed to be proper and is therefore made FINAL.

Objection to the Specification

3. The specification on page 1 should be amended to reflect the status of the parent applications. Appropriate correction is required.

4. Applicant has incorporated by reference all patent applications, patents and literature references cited in the specification. It is particularly noted that although nonessential material may be incorporated by reference to patents or patent applications published by the US or foreign countries or regional patent offices, prior filed, commonly owned US applications and non-patent publications, however, hyperlinks and/or other forms of browser executable code cannot be incorporated by reference, See MPEP 608.01. Further, mere reference to another application, patent, or publication is not an incorporation of anything therein into the application containing such reference for the purpose of the disclosure required by 35 U.S.C. 112, first paragraph. In re de Seversky , 474 F.2d 671, 177 USPQ 144, (CCPA 1973). In addition to other requirements for an application, the referencing application should include an identification of the referenced patent, application, or publication. Particular attention should be directed to specific portions of the referenced document where the subject matter being incorporated may be found. Further, Applicant is required to amend the disclosure to include the material incorporated by reference. The amendment must be accompanied by an affidavit or declaration executed by the applicant, or a practitioner representing the applicant, stating that the amendatory material consists of the same material incorporated by reference in the referencing application. In re Hawkins , 486 F. 2d 569, 179 USPQ 157 (CCPA 1973); In re Hawkins , 486 F. 2d 579, 179 USPQ 163 (CCPA 1973); In re Hawkins , 486 F. 2d 577, 179 USPQ 167 (CCPA 1973).

Further, as drawn to essential material, essential material may not be incorporated by reference to patents or applications published by foreign countries or regional patent offices, non-patent publications, a US patent or application which itself incorporates essential material by reference or a foreign application. It is noted that the specification states on page 7 that the complete sequences of the genes disclosed in Tables 2, 3 and 4 are available from UniGene and TIGR or Entrez Databases. These databases are considered non-patent publications.

In the interests of compact prosecution, it is noted that for the reasons set forth below, one cannot determine the metes and bounds of the claimed invention based on the accession umber attached to hepsin. Although Table 4 points to a website for the sequence that will "uniquely" identify the gene to be assayed, this information is clearly essential to the claimed invention, thus neither the website nor the information found therein may be incorporated by reference. However, Applicant may amend the specification to include sequence information drawn to the already disclosed accession number if the amendment is accompanied by an affidavit or declaration executed by the applicant, or a practitioner representing the applicant, stating that the amendatory material consists of the same material incorporated by reference in the referencing application. In re Hawkins , 486 F. 2d 569, 179 USPQ 157 (CCPA 1973); In re Hawkins , 486 F. 2d 579, 179 USPQ 163 (CCPA 1973); In re Hawkins , 486 F. 2d 577, 179 USPQ 167 (CCPA 1973) in combination with evidence demonstrating that the amendatory material is the same as that disclosed in the specification. This is particularly essential if the sequence attached to the accession number has been revised.

5. The specification is objected to because hyperlinks and/or other forms of browser-executable code are embedded in the text of the patent application. Embedded hyperlinks and/or other forms of browser-executable code are impermissible and require deletion. Appropriate correction is required.

6. This application contains sequence disclosures that are encompassed by the definitions for nucleotide and/or amino acid sequences set forth in 37 CFR 1.8821 (a)(1) and (a)(2). However, this application fails to comply with the requirements of 37 CFR 1.821 through 1.825 for the reasons(s) set forth on the attached Notice to Comply with Requirements for Patent Applications Containing Nucleotide Sequence And/Or Amino Acid Sequence Disclosures. In particular, Applicant is directed to page 36 of the specification. Examiner has made an effort to identify instances where the specification does not comply but applicant must carefully review the specification to identify and indicate where these instances may be found. Appropriate correction is required.

Applicant is given the period of reply for this action in which to comply with the sequence rules, 37 CFR 1.821-1.825. Failure to comply with these requirements will result in ABANDONMENT of the application under 37 CFR 1.821 (g). Extensions of time may be obtained by filing a petition accompanied by the extension fee under the provisions of 37 CFR 1.136(a). In no case may an applicant extend the period for response beyond the SIX MONTH statutory period. Direct the response to the undersigned. Applicant is requested to return a copy of the attached Notice to Comply with the response.

7. The specification is objected to because the specification includes blank spaces, for example, see page 33. Applicant must either remove the blank spaces

or amend the specification to provide the missing information. Appropriate correction is required.

Claim Rejections - 35 USC § 112

8. The following is a quotation of the first paragraph of 35 U.S.C. 112:

"The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention."

9. Claims 1, 3-6 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The claims are indefinite because the claims are drawn to detecting a level of expression of at least one gene identified in Tables 2-4, wherein the species of hepsin gene identified as accession number X07732 has been elected. However, the accession number is not sufficient to distinctly claim the identified hepsin gene XO7732 gene because sequences corresponding to accession numbers can be modified, changed, and/or updated, and thus the cited sequence may vary or change over time. Thus it is not possible to determine the metes and bounds of the claimed invention based only on the disclosed accession number.

10. Claims 1, 3-6 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

The claims are drawn to a method for screening a subject for prostate cancer comprising detecting a level of expression of at least one gene, hepsin which is identified in Tables 2 and 4 as X07732, wherein the accession number can be used to identify the unique identity of the gene (see page 41).

Specifically, since the claimed invention is drawn to the gene identified as hepsin X07732 and since the sequence of the gene is not disclosed in the specification and for the reasons set forth above, identification of a gene using only the accession number of that gene is indefinite, one skilled in the art clearly would not know how to make the claimed invention and in the absence of further guidance would not know how to use the claimed invention.

11. Claims 1 and 3-6 are rejected under 35 USC 112, first paragraph as lacking an adequate written description in the specification.

The examined claims are drawn to a method for screening a subject for prostate cancer comprising detecting a level of expression of at least one gene, hepsin which is identified in Tables 2 and 4 as X07732, wherein the accession number can be used to identify the unique identity of the gene (see page 41). In order to practice the claimed invention, that is assaying for the hepsin gene, identified in Tables 2 and 4, one must screen for X07732. However, since the sequence of the gene is not disclosed in the specification and for the reasons set forth above, identification of a gene using only the accession number of that gene is indefinite, the specification does not provide a written description of the claimed invention that satisfies the written description requirements of 35 USC 112, first paragraph.

12. No claims allowed.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Susan Ungar, PhD whose telephone number is (571) 272-0837. The examiner can normally be reached on Monday through Friday from 7:30am to 4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey Siew, can be reached at 571-272-0787. The fax phone number for this Art Unit is (571) 273-8300.

Susan Ungar
Primary Patent Examiner
February 22, 2005

Application No. ~~08/580,379~~ 10/054,498

NOTICE TO COMPLY WITH REQUIREMENTS FOR PATENT APPLICATIONS CONTAINING NUCLEOTIDE SEQUENCE AND/OR AMINO ACID SEQUENCE DISCLOSURES

The nucleotide and/or amino acid sequence disclosure contained in this application does not comply with the requirements for such a disclosure as set forth in 37 CFR 1.821 - 1.825 for the following reason(s):

☑ 1. This application clearly fails to comply with the requirements of 37 CFR 1.821 - 1.825. Applicant's attention is directed to these regulations, published at 1114 OG 29, May 15, 1990 and at 55 FR 18230, May 1, 1990.

☑ 2. This application does not contain, as a separate part of the disclosure on paper copy, a "Sequence Listing" as required by 37 CFR 1.821(c).

☑ 3. A copy of the "Sequence Listing" in computer readable form has not been submitted as required by 37 CFR 1.821(e).

☐ 4. A copy of the "Sequence Listing" in computer readable form has been submitted. However, the content of the computer readable form does not comply with the requirements of 37 CFR 1.822 and/or 1.823, as indicated on the attached copy of the marked-up "Raw Sequence Listing."

☐ 5. The computer readable form that has been filed with this application has been found to be damaged and/or unreadable as indicated on the attached CRF Diskette Problem Report. A substitute computer readable form must be submitted as required by 37 CFR 1.825(d).

☐ 6. The paper copy of the "Sequence Listing" is not the same as the computer readable form of the "Sequence Listing" as required by 37 CFR 1.821(e).

☐ 7.

Other: _____

Applicant must provide:

☑ An initial or substitute computer readable form (CRF) copy of the "Sequence Listing"

☑ An initial or substitute paper copy of the "Sequence Listing", as well as an amendment directing its entry into the specification

☐ A statement that the content of the paper and computer readable copies are the same and, where applicable, include no new matter, as required by 37 CFR 1.821(e) or 1.821(f) or 1.821(g) or 1.825(b) or 1.825(d)

For questions regarding compliance with these requirements, please contact:

For Rules Interpretation, call (703) 308-1123
For CRF submission help, call (703) 308-4212
For PatentIn software help, call (703) 557-0400

Please return a copy of this notice with your response.